DOCUMENT RESUME

ED 291 257 FL 017 185

AUTHOR Dolson, David P.
TITLE The Application of Immersion Education in the United States.
INSTITUTION National Clearinghouse for Bilingual Education, Arlington, Va.
SPONS AGENCY Office of Bilingual Education and Minority Languages Affairs (ED), Washington, DC.
REPORT NO ISBN-0-89763-114-5
PUB DATE 85
CONTRACT NIE-400-80-0040
NOTE 36p.
AVAILABLE FROM National Clearinghouse for Bilingual Education, 11501 Georgia Avenue, Wheaton, MD 20902.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Bilingual Education Programs; Comparative Analysis; Foreign Countries; *Immersion Programs; *Program Design; *Program Effectiveness; Program Evaluation; Second Language Instruction; Student Needs
IDENTIFIERS *Canada

ABSTRACT

The characteristics of Canadian language immersion, bilingual education, and modified immersion programs are described, and their characteristics are compared with research findings on the characteristics of effective dual language programs. The information provided is intended to assist policymakers, educators, and community leaders in making informed decisions about language development programs. Several questions associated with bilingual and immersion education are addressed: What is immersion education?; What is bilingual education?; Under what conditions have immersion and bilingual education programs been effective?; What is the potential of modified immersion designs to meet the educational need of minority language students?; and Under what conditions is modified immersion education a viable alternative to bilingual education? A list of references is supplied. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED291257

The Application of Immersion Education in the United States

David P. Dolson

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

E. Cubillos

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

FL019115

2 BEST COPY AVAILABLE

The Application of Immersion Education in the United States

David P. Dolson

This document is published by the National Clearinghouse for Bilingual Education. The National Clearinghouse for Bilingual Education is operated by InterAmerica Research Associates, Inc., pursuant to contract NIE 400–80–0040, and funded by the Office of Bilingual Education and Minority Languages Affairs, U.S. Department of Education. Contractors undertaking such projects are encouraged to express their judgment freely in professional and technical matters; the views expressed in this publication do not necessarily reflect those of the sponsoring agency.

InterAmerica Research Associates, Inc. d/b/a
National Clearinghouse for Bilingual Education
1555 Wilson Boulevard, Suite 605
Rosslyn, VA 22209

Library of Congress Catalog Card Number: 85–62671
ISBN: 0–89763–114–5
First Printing 1985
Printed in USA

Acknowledgement

I wish to acknowledge the assistance of Guillermo Lopez, former manager, Bilingual Education Office of the California State Department of Education, and other office staff members without whose guidance this paper would never have been completed. Additionally, helpful suggestions were received from Courtney Cazden, James Cummins, Fred Genesee, Steve Krashen, Sharon Lapkin, Tove Skutnabb-Kangas, and Tracy Terrell.

The views expressed in this publication do not necessarily represent those of the California State Department of Education.

Contents

Introduction 1

Immersion Education 5

Bilingual Education 9

Effective Dual Language Programs 13

Modified Immersion 17

Evaluation of Program Models 21

The Application of Program Models 23

Notes 27

References 29

Introduction

Special instructional programs for non-English language background students have been the subject of an intense and often emotional debate among educators, legislators, and the general public. State and federal programs established in the late 1960s to promote bilingual learning have come under attack in the 1980s. At a time when legal and fiscal support to bilingual education seem to be uncertain, the number of students who might benefit from such services is increasing dramatically. Nationally, it has been estimated that at least 3.4 million children are limited in the English language skills needed to succeed in school programs designed for native English speakers (Waggoner 1984). In California alone, the minority language population is approximately 963,000 (California State Department of Education 1984). More than ever, the adequacy of bilingual education programs to meet the educational needs of limited-English-proficient (LEP) children is an important issue. *Bilingual education programs* typically provide LEP students with academic instruction in their native language while they are learning English.

For a variety of sociopolitical, economic, as well as pedagogical reasons, many educators are interested in the short-term English language needs of minority language students, rather than their academic achievement. Surrendering to pressures to have such students learn English as quickly as possible, a search has been underway to find a "quick fix" solution. Monolingual immersion education is being increasingly cited as a viable option to bilingual education. *Immersion programs* use the target language as the medium of instruction for subject matter classes. These programs have been found to be effective for second language acquisition among English-speaking, majority language students in Canada. These students have acquired high levels of French proficiency without diminishing the overall development of their native English skills or their level of academic competence.

Due to the recognition of Canadian immersion programs as being successful, support for the use of monolingual immersion education with minority language students in the United States comes from both lay and professional groups.[1] The common element in these immersion proposals is the emphasis on English-only instruction. Such proposals are usually based on the assumption that previous waves of immigrants quickly learned English in English-only classrooms and, as a result, assimilated into U.S. life. Actual historical records show that most immigrants did not adjust easily. The integration of previous immigrants into mainstream society was based more on the enormous demand for agricultural and blue collar industrial workers than on the effectiveness of the schools at the time (Sowell 1981; Steinberg 1981). In some cases, a misunderstanding of the history of immigrant groups in the United States and a lack of understanding about the Canadian immersion model have led many lay advocates to propose "sink or swim" English-only programs under the guise of an immersion label.

Researchers describe the "sink or swim" approach as submersion rather than immersion. A *submersion program* is often defined as a curriculum designed for native English speakers, but applied imprudently to non-English-speaking students (EDAC 1981). A considerable amount of research evidence exists which documents the failure of submersion approaches to meet the educational needs of minority language students (Aguirre and Cepeda 1981; California State Legislature 1982; Rumberger 1981; National Assessment for Educational Progress 1982). Many educators who are aware of this research, readily reject submersion as an appropriate educational program for minority language students. Most educators agree, however, that a distinct instructional treatment is needed to promote adequate language development, academic achievement, and psychosocial adjustment for students from non-English language backgrounds (Baker and de Kanter 1983; Gandara and Samulon 1983).

To meet the special educational needs of these students, some educators have proposed an embellishment of submersion programs by combining the second language instructional features of immersion with mainstream classroom practices to create a *modified immersion program*. Under these conditions, minority language students would (1) receive English-only instruction provided by a monolingual, English-speaking teacher; (2) participate in special communicative-based English as a second language lessons; and (3) be provided with sheltered subject matter lessons in English. In contrast to the typical Canadian model, modified immersion is a short-term intensive program without a native language component.

Proponents of modified immersion find it an attractive alternative to bilingual instruction because a considerable number of research

and evaluation studies seem to indicate that (1) bilingual education has not consistently promoted improved English language development and scholastic achievement among program participants and (2) new information is available to support the idea that English-only immersion may be an effective approach to use with non-English language background students. Supporters of bilingual education programs counter these arguments by suggesting that (1) many bilingual programs have been successful and (2) the data on immersion education is being misinterpreted and overgeneralized.

The purpose of this paper is to describe the characteristics of Canadian immersion, bilingual education, and modified immersion programs, and to compare these program characteristics with research findings on the characteristics of effective dual language programs. This information will assist policymakers, educators, and community leaders to make informed decisions about language development programs. The document will address several key questions associated with the controversy over bilingual and immersion education:

- What is immersion education?
- What is bilingual education?
- Under what conditions have immersion and bilingual education programs been effective?
- What is the potential of modified immersion designs to meet the educational needs of minority language students?
- Under what conditions is modified immersion education a viable alternative to bilingual education?

Immersion Education

Immersion education has been used primarily as a program of bilingual instruction for English-speaking students in Canada. Most often, monolingual English speakers are enrolled in French immersion schools or classrooms. In such settings, participating students are schooled in and through French for a major part of their public school education (Genesee 1984). Canadian educators and researchers have developed a number of immersion models: early total, early partial, late total, late partial, delayed, and others. In this document, references will be restricted to the early total French immersion model since it is the most popular approach and because evaluation findings on this model show it to be consistently effective (Swain 1984).

Typically, the early total model is designed to cover kindergarten through grade 12. French is the exclusive medium of instruction in the early grades, and English is gradually introduced into the curriculum in increasing amounts until the sixth grade when it accounts for at least 50 percent of instructional time (Lapkin and Cummins 1984). A typical example of the percentage of instructional time in French across grade levels is displayed in figure 1 (see page 6).

In immersion programs the second language (L_2) of the students is used not only for language instruction but also for delivery of subject matter classes. The use of the second language as a medium of instruction for subjects such as math, science, or social studies is one of the most distinguishing features of immersion education. When subject matter is presented to students in the L_2, at least initially, teachers commonly modify their language in such a way as to make the input highly comprehensible (Krashen 1981; Swain 1984; Long 1983). For example, the teacher may simplify his or her speech and use various contextual clues such as gestures, props, or visual aids. Since the teacher is usually bilingual and the students may answer in their native language, the teacher can continually check the students' level of comprehension. The teacher is then able to adjust instructional

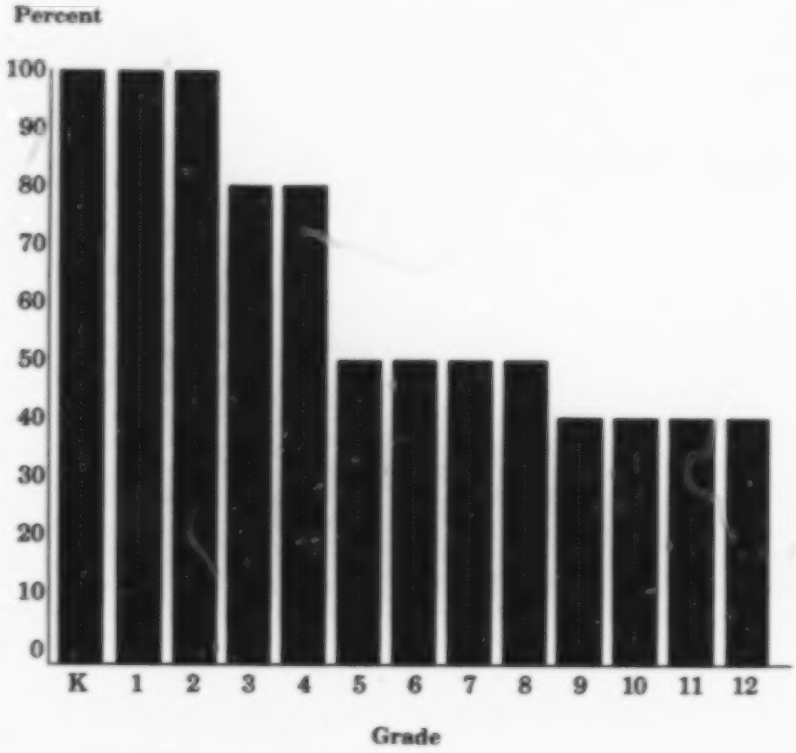
language to the students' level of understanding. In the United States, this mode of instruction is known as a sheltered language approach.

The sequence and duration of L_1 and L_2 instruction in immersion programs is also noteworthy. While initial instruction is provided in French (L_2), English (L_1) is eventually added to the curriculum. By the end of the intermediate grades, the amount of English instruction is equal to or greater than the amount of French. Students usually participate in the program for a period of at least five to nine years.

The amount and nature of exposure to both the L_1 and L_2 are the predominant but not the only important elements of immersion

Figure 1

Percentage of Instructional Time in French in Canadian Early Total Immersion Programs



Adapted from Lapkin and Swain 1984, 50.

education. In addition, Canadian immersion programs are characterized by the following features:

Staffing. Immersion teachers are usually bilingual individuals who have native or native-like ability in the target language of instruction. The teachers, however, assume monolingual roles. French-speaking instructors teach the language and subject matter through L_2 only. They rarely, if ever, speak to the students in English in the school setting. English-speaking teachers conduct the L_1 component of the program in a similar manner (Lapkin and Cummins 1984).

Students. Immersion program participants have been predominantly middle-class students from English-speaking home environments who have had little or no previous exposure to French.[2] Native French speakers are rarely mixed with English speakers in Canadian immersion programs (Genesee 1984).

Location. Immersion programs are conducted either in immersion schools (immersion centers) or designated classroom tracks in dual-track, English-language schools (Lapkin and Cummins 1984).

Goal. Immersion programs have been designed to promote the acquisition of high levels of French without diminishing the overall development of native English language skills or normal achievement in subject matter areas. That is, proficient bilingualism and academic achievement, not just French proficiency, are the objectives of the programs.

Since the inception of the first Canadian immersion experiments in the mid-1960s, a substantial number of research and evaluation studies have been conducted on the effects of the program. Outcomes have been consistently positive. The findings to date can be summarized as follows:

- Students acquire high levels of French language skills. Early total immersion participants often acquire native-like receptive skills (listening and reading) as well as very high levels of productive skills (speaking and writing). While their productive skills are usually not native-like, immersion students are substantially more proficient in these areas than students schooled in conventional second and foreign language programs (Genesee 1983; Harley 1984; Swain 1983b, 1984; Lapkin and Swain 1984).
- Participants perform as well as or better than their monolingually educated counterparts in the areas of English language proficiency. In many cases, the immersion experience seems to enhance the native English language skills of majority language students (Swain and Lapkin 1981).
- Students in French immersion achieve as well in the subject areas of mathematics, science, and social studies as students

studying in English-only programs. Immersion education appears to have no negative effects on general intellectual development. On the contrary, in some cases the immersion experience appears to stimulate and expand cognitive and creative abilities (Swain 1984).

- Participants adjust smoothly to the immersion school environment, maintain a positive self-concept, and sometimes develop positive attitudes toward minority language groups (Lambert 1984).

Studies on the progress of students in immersion programs, however, have shown that many students experience an initial but temporary lag in the development of literacy-based skills. Immersion students are often behind conventionally schooled students in reading, spelling, and writing during the primary grades but catch up around third grade (the grade level at which L_1 instruction is usually initiated) and may even surpass their monolingual counterparts at the upper elementary levels (Swain 1984).

Since the first immersion experiment at St. Lambert, Quebec, the program has spread to every province and territory in Canada. During the 1977–78 school year, 37,881 students were enrolled in immersion programs in grades K–12. In the 1982–83 school year, it is estimated that more than 114,000 students participated (Commissioner of Official Languages 1984). The increase in immersion programs has been especially dramatic in the last several years (*CPF Newsletter* 1981).

Impressed by the favorable results of immersion in Canada, educators have initiated a number of experiments with English-speaking students in the United States (Ramirez 1985; Rhodes and Schreibstein 1983; De Lorenzo and Gladstein 1984; Genesee, in press). Virtually all of the reported programs have been designed to teach French, German, Spanish, or some other second language. Although only a few of these programs have been carefully evaluated, initial reports are encouraging. Native English speakers in the United States seem to benefit in the same ways from immersion education as do their counterparts in Canada (Campbell 1984; Genesee, in press).

In summary, it appears that Canadian immersion programs are successful in promoting high levels of second language proficiency at no cost to English language development, academic achievement, or psychosocial adjustment. Somewhat unexpectedly, the immersion experience also seems to lead to greater native language ability and positive cross-cultural behaviors among many program participants. Immersion education for English-speaking, majority language students is an enrichment program not only in terms of bilingualism but also in terms of generally superior scholastic and social performance.

Bilingual Education

Concurrent with the development of immersion programs in Canada, state and federal education agencies as well as local school districts in the United States initiated a large number of bilingual education programs for minority language students. While there are many different models of bilingual instruction, the program most often mandated by law is transitional bilingual education (Baker and de Kanter 1983). The idea behind such programs is to provide students from non-English-speaking backgrounds with instruction in their native language while they are acquiring English. This approach is thought to (1) improve English development, (2) sustain academic achievement, and (3) promote adequate psychosocial adjustment.

Two common bilingual designs, both transitional programs, have evolved in recent years—early transitional and full bilingual. The designs differ basically in the amount of time students participate in the L_1 instructional component. The pattern of language use in the two elementary-level models is illustrated in figure 2 (see page 10). For example, in early transitional programs, participants are exited after they are perceived to have sufficient fluency in English oral skills (listening and speaking). This usually occurs within two to three years (Cummins 1981). On the other hand, in full bilingual programs, participants continue to receive L_1 instruction at least until they have mastered English literacy skills, in addition to oral skills, at a level equivalent to native English speakers of the same grade and age group. This frequently happens within four to seven years of formal instruction (Cummins 1981).

Bilingual programs commonly provide initial literacy and some subject matter instruction in the students' native language. At the same time, program participants receive English as a second language instruction and usually participate in a substantial amount of mainstream classroom activities conducted in English. In bilingual programs, the proportion of English instruction increases over time. In

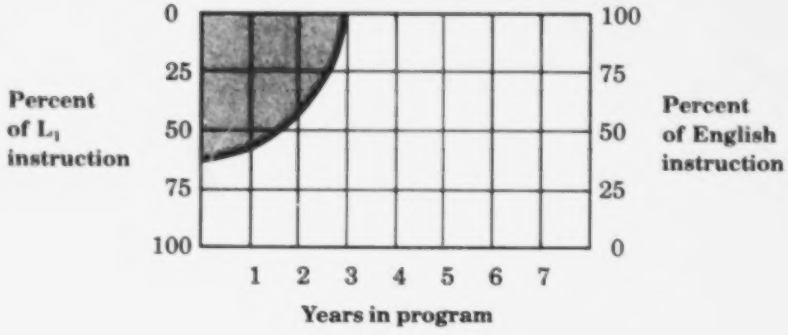
early transitional programs, English is usually the only language of instruction by the end of the second or third year of instruction. In full bilingual models, L_1 instruction usually continues across all grade levels included in the program. Even in the full bilingual designs, however, by about the fourth or fifth year, L_1 instruction is frequently reduced to approximately 20 percent of the school day.

Virtually all major evaluation studies indicate substantial variation in the way bilingual programs are implemented (AIR 1977; Baker and de Kanter 1983). In fact, some studies indicate that there is sometimes more variation between classrooms in the same school within the same program model than between different schools and program models (Development Associates 1980). When fully implemented,

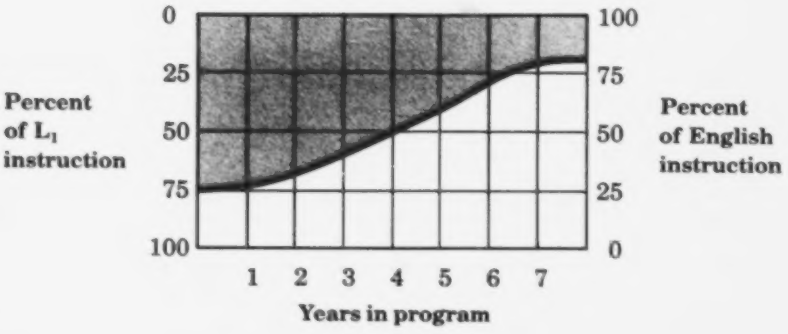
Figure 2

Amount and Duration of L_1 and L_2

Early Transitional Bilingual Programs



Full Bilingual Programs



bilingual programs are characterized by the following features:

Staffing. Classrooms are staffed by certified bilingual teachers who have adequate levels of fluency in the native language of the minority language students. Many bilingual teachers are assisted by teacher aides who are also bilingual.

Students. The students in bilingual programs are from non-English language backgrounds and have been assessed to be limited in English language skills. Most of these students come from low socioeconomic status families. In some programs, provision is made for the enrollment of a proportion of English-only and/or fluent English-speaking students.[3]

Location. Virtually all bilingual programs are conducted in mainstream schools. Program participants are assigned to a bilingual track covering the grade span included within the program design.

Goal. Early transitional programs have been designed to promote the rapid development of English language skills among students of limited English proficiency so that such students may quickly move into and benefit from the mainstream English curriculum. Full bilingual programs, on the other hand, promote the gradual acquisition of native-like English proficiency at no cost to eventual academic achievement, psychosocial adjustment, nor native language development. Transfer to mainstream classrooms is based on the ability of individual students to handle the academic curriculum in English as well as the average native English speaker of the same age and grade level.

Current state and national enrollment reports show that only a small percentage of minority language students are provided an opportunity to participate in bilingual programs. In California, it is suspected that fewer than 20 percent of the students who are identified as limited English proficient (LEP) are currently placed in full or early transitional bilingual programs as described in this document (California State Department of Education 1984).

Evaluation and research studies on bilingual programs indicate that such programs are sometimes effective and sometimes ineffective (Baker and de Kanter 1983; Dolson, in press). Even those bilingual programs considered to be ineffective usually have had, at the very least, outcomes similar to those of mainstream school programs and compensatory designs which include an English as a second language instructional component. LEP students in both nonbilingual and inappropriately implemented bilingual programs generally perform at a level which is at least one to two years behind native English speakers of the same age and grade (Cummins 1981). On the other hand, a significant number of full bilingual programs report quite positive outcomes in which minority language students not only attain high levels

of English proficiency but also achieve academically as well as or better than their native English-speaking counterparts. Full bilingual programs in the United States have had similar language, academic, and psychosocial results as the Canadian immersion programs (Cummins 1981; Lambert 1984; California State Department of Education 1982). Minority language students enrolled in such programs are reported to eventually:[4]

- Acquire native-like proficiency in English;
- Achieve as well as their native English-speaking counterparts in subject areas such as mathematics and science;
- Adjust smoothly to the school environment, maintain a positive self-concept, and develop favorable attitudes toward both minority and majority language groups;
  Develop grade-appropriate native language skills in listening, speaking, and reading.

Evaluation studies of bilingual programs provide clues as to why some programs have had discouraging results. More than half of all bilingual classrooms in California are staffed by teachers who do not have sufficient minority language proficiency to obtain a bilingual teaching certificate (California State Department of Education 1984). Many programs also suffer from financial and administrative limitations—funds are not always available to purchase appropriate instructional materials, and sufficient training may not be provided for staff members.

The necessary administrative support to ensure consistent and comprehensive instructional treatment may also be limited. Minority language students might be served in bilingual classrooms at some grade levels while not at others within the same school because of a shortage of bilingual teachers or inadequate program planning. In addition, some bilingual programs suffer from ineffective instructional practices such as language mixing, translating, or lack of methodological clarity.

The failure to fully implement bilingual instructional designs is clearly a substantial but not the sole influence on program outcomes. There is little doubt that other important variables contribute significantly to the ultimate results of bilingual instruction. An analysis of research and evaluation studies on language development programs reveals a number of powerful sociolinguistic and instructional factors associated with effective dual language programs that can be used to explain why some programs for minority language students are successful and others are ineffective.

Effective Dual Language Programs

In the last several years, a number of comprehensive reviews have been done on research and evaluation studies concerning bilingual and immersion education (Baker and de Kanter 1983; Cummins 1979, 1983; Diaz 1983; Dolson, in press; Swain and Lapkin 1981). A meta-analysis of such educational investigations points to certain sociolinguistic and instructional factors, both formal and informal, which tend to contribute to successful dual language programs. The importance of these factors is evident from the frequency and consistency with which they are found in programs which promote high levels of language development, academic achievement, and positive psychosocial behavior. The constructs selected for discussion here seem to be especially relevant to the debate regarding the utilization of immersion and bilingual instructional strategies.

Duration of treatment. The instructional treatment is provided to the participating students for a period of at least four to six years. This is the amount of time required to reach second language or bilingual proficiency as confirmed by number of evaluation studies on immersion and bilingual programs (Cummins 1981; Swain 1984). In its review of foreign language programs, the National Commission on Excellence in Education (1983) has concluded that achieving proficiency ordinarily demands from four to six years of study.

Exposure to L_2. Students are exposed to ample amounts of comprehensible second language input in acquisition-rich environments (Krashen 1981, 1984). In the Canadian immersion programs, this is accomplished through communicative-based language classes as well as sheltered subject matter lessons. In favorable bilingual program situations in the United States, students are adequately exposed to English in the classroom as well as in other school, community, and home contexts.

Use of L_1. The students' native language is taught as a subject and is used for subject matter instruction. This is done to promote L_1

development, to foster academic achievement, and to provide students with background knowledge to make L_2 input more comprehensible (Krashen 1981, 1984). In immersion contexts, the sequence of instruction is L_2, then L_1. In bilingual programs, this is reversed with initial instruction in L_1 with gradual increments in the amount of L_2 use. In both bilingual and immersion programs, the language sequence is selected according to the sociolinguistic notion that the school should initially promote the language with less societal sustenance. Regardless of sequence, however, effective programs continue the use of both languages for the duration of the treatment.

Academic focus. The programs are designed to focus on subject matter as well as language development. Bilingually schooled students are exposed to the same academic core curriculum as students in regular programs. In immersion programs, academic achievement is fostered through L_2 subject matter lessons and interactions at home and in the community which occur in the students' native language. Later, academic achievement is further bolstered by subjects taught through L_1. For minority language students in effective bilingual programs, formal classroom instruction in and through the L_1 forms the basis for initial academic advancement. Sheltered English lessons also contribute to academic progress. Later in the program, academic matter is presented in increasing amounts in English through mainstream lessons.

Even when operated under optimal conditions, participants in immersion and bilingual programs have sometimes experienced a different rate of scholastic achievement than nonparticipants. As a rule, students in traditional programs are expected to demonstrate one year of achievement for each year of school attendance. Although bilingually schooled children often lag behind in certain literacy-based skills in the primary grades, they begin to approach grade-level norms as they move through the intermediate grades. By grade 6, the participants of dual language programs frequently surpass their counterparts in monolingual programs. If the instructional treatment is extended over the intermediate grades, the initial lag experienced in immersion and bilingual programs is only temporary. In immersion and bilingual programs, academic learning is eventually accelerated to the extent that (1) minority language students in bilingual programs are often able to close the achievement gap which has traditionally separated them from native English speakers and (2) majority language students in immersion programs perform academically as well as or better than their monolingually schooled counterparts while also acquiring high levels of proficiency in a second language.

A convincing explanation of how learning of and in one language results in academic achievement in a second has been advanced through

the notion of a "Common Underlying Proficiency" (Cummins 1979, 1981). This model of bilingual proficiency posits the idea that many literacy-related aspects of language proficiency are common or interdependent across different languages. Cognitive/academic skills, competencies, and knowledge learned in one language can be expressed, manifested, and applied in another once basic communication skills are acquired in both languages. Research and evaluation reports on Canadian immersion and full bilingual programs provide substantial evidence that the instructional designs of these programs are structurally aligned with the principle of a common underlying proficiency.

Nature of bilingual instruction. Both immersion and bilingual strategies include the use of two languages. However, monolingual lesson delivery (i.e., different periods of time devoted to instruction in and through each of the two languages respectively) seems to be superior to designs which rely on language mixing during a single lesson or time frame (Baker and de Kanter 1981; Dulay and Burt 1978; Legaretta 1979, 1981; Swain 1983a). This is not to say that language mixing itself is harmful; rather, it appears that sustained periods of monolingual instruction in each language are required to promote adequate academic as well as language development.

Quality of instructional personnel. Students receive their instruction from certified teachers. Over the course of the program, students are exposed to a number of teachers who have native or native-like ability either in the first or second language. Teachers may even be monolingual in one of the languages or, although bilingual, assume monolingual roles when interacting with students.

Additive bilingual environment. Students in dual language programs are provided the opportunity to acquire a second language at no cost to their home language and culture. This type of environment often leads to high levels of proficiency in two languages. Concomitantly, additive bilingual contexts seem to promote adequate self-concept, improve cross-cultural competencies, and often result in prosocial attitudes. Conversely, subtractive bilingual contexts in which the native language is replaced by a second language seem to have negative effects on the school performance of many minority language students. Native language loss is often associated with lower levels of second language attainment, scholastic underachievement, and psychosocial disorders (Lambert 1984). Successful language development programs seem not only to prevent the negative consequences of subtractive bilingualism but also to effectively promote the beneficial aspects of additive bilingualism.

The instructional characteristics and sociolinguistic structures which seem to be strongly associated with the success of Canadian immersion programs correspond to the same psycholinguistic and

sociopedagogical principles underlying full bilingual education programs in the United States. These elements are:

- Program duration from four to seven years
- Adequate exposure to L_2
- Focus on academic achievement
- Bilingual instruction through separate monolingual lesson periods
- Quality instructional personnel
- Additive bilingual contexts.

Should any of these elements be neglected, the effectiveness of the instructional treatment, whether immersion or full bilingual, will probably diminish. In the following section, these elements are used as guiding standards to analyze the potential of modified immersion proposals to meet the scholastic needs of minority language students in the United States.

Modified Immersion

One way to examine the potential of modified immersion to promote the scholastic success of minority language students is to determine the degree to which modified immersion designs are aligned with the underlying sociolinguistic and instructional structures which seem to account for the success of effective dual language programs.

Duration of treatment. Students in effective U.S. bilingual programs and Canadian immersion programs take an average of four to seven years to reach grade-level academic ability in a second language. Many modified immersion programs are designed to serve students for a maximum duration of three years. This implies, based on the previous discussion of effective dual language programs, that most participants will probably be returned to the regular classroom environment before they have acquired a level of academic language skills equivalent to their native English-speaking counterparts—a submersion situation.

Exposure to L_2. Modified immersion is likely to provide minority language students with adequate amounts of input in English. The philosophy of this approach has been articulated by Baker (1984,2):

> The solution to developing proficiency and progressing in other subjects is to teach all subjects in English at a level understood by the students. The curriculum assumes no prior knowledge of English. Language minority students in effect learn English as they learn math, and learn math through English instruction that is understandable at their level of English proficiency. In short, practice makes perfect, and English is learned by using it as much as possible through the school day.

This philosophy does not take into account the sociolinguistic contexts in which Canadian immersion and U.S. language assistance programs operate. In Canada, French input for English-speaking students is basically limited to classroom situations. On the other hand, minority language students in the United States have a high incidence of interaction with fluent English speakers in their homes, neighborhoods, and in the wider community (Swain 1981, Veltman 1981). Although claims have been that some minority language chil-

dren who live in borderlands, ethnic ghettos, and rural areas are not naturally exposed to English in sufficient amounts to assure communicative skills development, most published research has found that this is not necessarily the case (Cummins 1981; Hernandez-Chavez 1984). Minority language students are commonly exposed to significant quantities of comprehensible input outside of the school setting as confirmed by Dolson (1985) in barrio school situations in east Los Angeles, as well as by Tempes and others (1984) in borderland school situations in the San Diego area. Several researchers have suggested that, under these circumstances, the main role of the school should be to provide cognitive/academic language opportunities (Swain 1981; Cummins 1981; Legarreta 1979; Hernandez-Chavez 1984). Thus, modified immersion can be questioned on the grounds that the allocation of inordinate amounts of instructional time devoted to "English input" is unnecessary for the normal development of basic English communication skills.[5] More importantly, the excessive focus on English conversational fluency adversely reduces the amount of instructional time available for cognitive/academic purposes.

Use of L_1. In effective bilingual programs, the native language is used to (1) sustain academic achievement in subject matter areas, (2) provide background knowledge to support L_2 acquisition, (3) facilitate adequate psychosocial and cross-cultural adjustment, and (4) promote proficient bilingualism. Designers of modified immersion programs take an opposite viewpoint in that the use of L_1 is considered to be unnecessary or even harmful (Hernandez-Chavez 1984). The student's native language is omitted or quickly phased out of the academic program. Modified immersion proposals do not incorporate alternative or replacement provisions to promote normal academic achievement and to encourage adequate sociocultural adjustment. By ignoring native language development, an integral personal, economic, and social attribute is neglected. Proficient bilingualism has not only been shown to expand the cognitive/academic abilities of individuals (Cummins 1981; Lambert 1984) but is also considered to be a critical national resource (President's Commission on Foreign Language and International Studies 1979).

Sustained academic achievement. The more sophisticated modified immersion designs call for sheltered English subject matter instruction. In lieu of native language instruction, the sheltered classes are expected to bear the full burden of developing academic competencies in curricular areas such as math, science, social studies, and health. In Canadian immersion programs, however, sheltered lessons are bolstered by the subsequent provision of L_1 subject matter instruction. As mentioned previously, many Canadian immersion students lag behind academically until the L_1 component is formally introduced into the curriculum.

Immersion educators not only meet the demand for standard academic attainment by including an extensive L_1 component (approximately 60 percent of the instructional time in the upper grades) but are also able to depend on significant L_1 academic input from society and family. The primarily middle-class Canadian participants invariably find academic support at home and in the community in their native language (English); an opportunity rarely available to minority language students in the United States. Minority language students commonly enroll in school with below average scholastic skills. These students must not only learn English but must also catch up academically to native English speakers. Modified immersion proposals do not address the issue of academic achievement.

Quality of instructional personnel. Modified immersion proposals vary as to whether bilingual or monolingual teachers will be used to staff classrooms. If bilingual teachers are employed, then the same shortage which plagues bilingual education will affect modified immersion programs. Requiring bilingual teachers for modified immersion classrooms questions the contention that modified immersion programs are needed because there is a shortage of bilingual teachers and personnel. If bilingual teachers are not employed, then another problem is left unaddressed. The notion of comprehensible input (Krashen 1981) is a basic principle of communicative-based ESL and sheltered subject matter classes. If nonbilingual teachers cannot understand L_1 messages from students, they will be unable to provide meaningful replies in English. If communication is hindered, the classroom atmosphere will change from a sheltered to more of a submersion environment.

Additive bilingual process. As mentioned previously in this paper, successful bilingual and immersion programs have been conducted in additive bilingual contexts where the participating students are given an opportunity to acquire high levels of proficiency in a second language at no cost to native language development and academic achievement. Modified immersion, on the other hand, contributes to a subtractive bilingual context. An impressive number of research and evaluation studies have shown that subtractive bilingual situations are potentially harmful (Lambert 1984). Students subjected to such experiences at school often (1) lose native language skills quicker than they acquire the second language (Skutnabb-Kangas 1979), (2) attain limited levels of development in two languages (Cummins 1981), (3) experience academic underachievement (Cummins 1981), and (4) manifest a variety of negative psychosocial traits (Lambert 1982).

Table 1 synthesizes program distinctions, contrasting the underlying sociolinguistic and instructional features of modified immersion with those of full bilingual and Canadian immersion programs.

Table 1

Instructional and Sociolinguistic Conditions in Modified Immersion Proposals, Full Bilingual Programs, and Canadian Immersion Programs

Instructional or sociolinguistic condition	Modified immersion proposals	Full bilingual programs	Canadian immersion programs
Duration of treatment	One to three years	Four to seven years or more	Four to seven years or more
Exposure to L_2	Communicative-based L_2, sheltered subject matter classes, and general interactions in the wider community in L_2	Communicative-based L_2, sheltered subject matter classes, background support in L_1, and general interactions in the wider community in L_2	Communicative-based L_2, and subject matter classes in L_2, background support in L_1, and general interactions in the wider community in L_1
Use of L_1	Omitted or quickly phased out	Instruction in oral language. Literacy and subject matter classes	Instruction in oral language. Literacy and subject matter classes
Sustained academic achievement	Sheltered and regular L_2 subject matter classes	L_1, sheltered, and regular L_2 subject matter classes	L_1, sheltered, and regular L_2 subject matter classes
Quality instructional personnel	Monolingual*	Bilingual**	Bilingual**
Bilingual environment	Subtractive	Additive	Additive

*Some proposals call for bilingual staff, especially in the initial period.

**Some program designs utilize monolingual teachers (and/or bilingual teachers who assume monolingual roles) who provide instruction in L_1 and/or L_2 at separate periods of time.

Evaluation of Program Models

Virtually all major reviews of the literature on the education of bilingual populations come to the same conclusion—further research work is needed (Development Associates 1980; EDAC 1981; California State Department of Education 1982; Diaz 1983). However, two precautions should be considered by those investigating these issues.

First, speculation concerning the shortcomings and limitations of modified immersion should be tested empirically through carefully designed research studies. These research and evaluation studies must be conducted in adherence to established scientific standards and should not be unduly influenced by political and bureaucratic pressures. For instance, the tendency exists to view modified immersion as a "quick-fix" response to current political pressures. Evaluations of such programs should not be designed to compare participants of immersion programs, for example, with those participating in bilingual programs after only one or two years of treatment. This approach would run counter to the evidence on dual language programs which shows that, even under optimal conditions, students require at least four to six years of study for full language development. The danger of such evaluations is that one program may be prematurely declared to be equal or superior to the other when, in reality, longitudinal data would reveal a completely different outcome. In Canada during the first two or three years, immersion students commonly perform slightly below their grade-level counterparts in traditional programs. It is not until the fourth year that the immersion participants begin to catch up as a group and by the sixth year that bilingually schooled Canadian students commonly surpass their peers. If the Canadian immersion programs had not been researched and evaluated on a longitudinal basis, they might have been discontinued before being recognized as the successful model they are today.

Second, investigations of language development programs must be done with the view of identifying practices for *optimal* outcomes.

The concern for minority language students' acquisition of the societally dominant language (English) should not lead to the neglect of their individual intellectual, emotional, and self-definitional development (Fishman 1984). Research designs which ignore important scholastic and sociocultural factors are incomplete. Additional studies should be done on modified immersion and transitional bilingual programs, along with other potentially successful approaches such as maintenance, ethnic heritage, and two-way bilingual programs.[6] The call for flexibility must be bidirectional. School districts should be allowed to experiment in a responsible and informed manner. Similarly, parents and community members, once provided with accurate and reliable background information, should be given more opportunity to select program options which they feel are best suited for their children and communities. The selection of education programs should be the product of a joint effort among parents, community members, and school officials.

The Application of Program Models

There are situations in which the application of monolingual immersion might be preferred to full bilingual education. School officials find that, in some cases, the human and material resources needed to implement bilingual instruction are just not available. In addition, some parents, even after being informed of the intent and content of bilingual education, may decide not to enroll their children in such programs. Given the opportunity, many parents might select another program option such as modified immersion. The case has also been made that bilingual instruction may not be appropriate in some situations. The supporting argument often given is that of the academically prepared secondary student who has only one or two years remaining before high school completion.

Several sociolinguistic contexts remain for which the relationship between bilingual schooling and psychoeducational research evidence has not been established. For instance, is there sufficient social and practical value in developing childhood literacy programs in languages such as Hmong or Cape Verdean Creole for which there is no corresponding adult literacy? Also, what is the relationship between minority group language maintenance/shift and formal bilingual schooling?

The decision to use modified immersion strategies in any of the contexts mentioned in the preceding paragraphs should be carefully weighed. A determination that it is unfeasible to continue with efforts to organize and implement a full or partial bilingual program demands an exceptionally cautious deliberation on the part of the school district officials. Only compelling evidence regarding either sociolinguistic incompatibilities or insuperable administrative complications should lead to a decision to abandon the psychoeducational model. Even in cases where implementation of a bilingual instructional approach appears to be impractical or unprofitable, it does not necessarily follow that modified immersion is the only or even the best alternative. There

are a variety of competing possibilities such as formal English as a second language (ESL), ethnic heritage language, and compensatory/remedial programs to name a few. Without additional research evidence, there is little justification for a policy which would indiscriminately favor modified immersion over these and other options.

An analysis of research and evaluation studies on foreign language and bilingual programs indicates that the technology is present to adequately design dual language programs for both majority and minority language students. When appropriately planned and implemented, immersion seems to meet the language, academic, and psychosocial needs of majority group students while bilingual or native language programs appear better suited for minority language pupils. For their respective targets properly conducted immersion and bilingual programs often result in (1) high levels of English skills, (2) high levels of skills in another language, (3) normal to superior academic achievement, and (4) adequate to advanced psychosocial and cultural development. The question is no longer whether or not bilingual schooling is effective. Such language development programs have been shown to be superior to monolingual schooling when the appropriate instructional design is matched with local sociolinguistic and cultural realities. The remaining concerns are:

- How soon will additional research evidence be available to guide educational policymakers in determining whether or not the promotion of full bilingual education or other language development programs is appropriate for specific sociolinguistic settings;
- What is the relative effectiveness of modified immersion when compared with other monolingual approaches or when combined with bilingual strategies;
- Will the public educational establishment be able to overcome the logistical complications, administrative difficulties, and social conflicts associated with the provision of effective instructional programs to the large and ever-growing population of minority language students?

The realization that modified immersion education is not an unconditional response to the problem to educating nearly three and one-half million minority language students in the United States should not lessen interest in other aspects of immersion. First of all, some forms of modified immersion programs for minority language students, in whole or in part, may be applicable for certain students as an additional component of a bilingual program or in situations where it is not feasible to implement a program of bilingual instruction.

Second, a substantial amount of well-conducted research indicates

that immersion education, for students who speak the societally dominant language as their native language, is on average the most effective second language instructional model known to date (Krashen 1984; Swain 1984; Swain and Lapkin 1981). As a result of immersion schooling, majority students seem to gain important sociocultural perspectives. They often develop cooperative and accommodating viewpoints in regard to minority relations. These competencies, when coupled with the language, academic, and psychosocial insights developed as a result of participation in immersion programs, equip majority students with many of the concepts, skills, and sensibilities they need in order to live in harmony with persons from other cultural groups. Perhaps immersion education for majority children can be a way, albeit an indirect one, of promoting effective instruction for ethnolinguistic minority students.

Majority group support for effective language assistance programs for non-English language background groups is all the more important when we realize that the subordinate status of minority language students in the United States contributes greatly to their underachievement in our educational system. Hernandez-Chavez (1984) and others have identified some of the sociopolitical features which are thought to forestall the possibility of equal educational opportunities for minority language students in the United States. When minority language students are schooled under conditions in which (1) their academic needs are not fulfilled by the school program, (2) their native language is omitted or quickly phased out of the academic programs, and (3) their parents are not given adequate opportunities to participate in school activities, the result is often chronic underachievement and unsatisfactory socialization. (See table 2, page 26, for a comparison of schooling environments for majority and minority language students in the United States.)

Minority status, it seems, is a very powerful intervening variable. The evidence, so far, indicates that some types of full bilingual education programs can counter, to some degree, the negative influences of minority status. Most research and theoretical studies point to the fact that, if implemented imprudently, monolingual immersion programs by contributing to a subtractive bilingual process are more likely to exacerbate, not significantly ameliorate, the problem of schooling non-English language background students.

Table 2

Comparison of Majority and Minority Schooling Environments in the United States

Majority Language Students	Minority Language Students
Students come mainly from the the middle socioeconomic group.	Students come mainly from the lower socioeconomic group.
Parents have control over political and economic resources.	Parents have no control of resources.
The school program is designed to serve the needs of this group.	The school program is designed to serve the needs of the majority society.
L_1 is the dominant language. It has prestige in society and has institutional support.	L_1 is the subordinate language. It is undervalued in society and has little institutional support.
L_1 is fully maintained. The child keeps and develops native cultural identity.	L_1 is most often lost. The child is alienated from both L_1 and L_2 cultures.

Notes

1. Several researchers have suggested that modified immersion for minority language students be labeled monolingual immersion, while the classical Canadian model be referred to as bilingual immersion (James Cummins and Tracy Terrell, personal communications).
2. In the English-speaking provinces of Canada, most participants in immersion programs come from the middle class. In the bilingual provinces (Quebec and Manitoba), some students from working-class families are enrolled in the program (Fred Genesee, personal communication).
3. Fluent English-speaking students have a home language other than English but, based on formal assessment, are also determined to be legally proficient in English.
4. For other reviews on bilingual program outcomes see: Diaz 1983; Tempes, et al. 1984; Troike 1978; and Dolson, in press.
5. This appears to be confirmed by evaluations of "European Model" and Canadian immersion schools (Baetens Beardsmore and Swain 1985). When students studying French as a second language in Brussels, Belgium, were compared with Canadian counterparts, it was found that European students attained equal or even higher levels of French proficiency after a considerably shorter period of formal instruction (1,300 hours in Belgium vs. 4,500 hours in Canada). While the instructional models were similar in the two programs, the main difference in the settings appears to be the significantly greater amount of interaction in French experienced by the students in Brussels in out-of-school contexts.
6. At the time of the development of this paper, no published evaluation studies or research investigations were available on the use of modified immersion programs with language populations. The U.S. Department of Education has commissioned a study on pilot immersion programs being implemented in Texas, California, New Jersey, and other states with Hispanic primary school students (David Ramirez, SRA Technologies, personal communication).

References

Aguirre, Edward, and Rita M. Cepeda. 1981. "Hispanics and Education in the 1980s." In *The State of Hispanic America*. National Hispanic Center for Advanced Studies in Policy Analysis. Oakland, CA: Babel.

American Institute for Research (AIR). 1977. *Evaluation of the Impact of ESEA, Title VII Spanish/English Bilingual Education Program*. Palo Alto: AIR.

Baker, Keith A., and Adriana de Kanter. 1983. *Bilingual Education: A Reappraisal of Federal Policy*. Lexington, MA: D.C. Heath.

Baetens Beardsmore, Hugo B., and Merrill Swain. 1985. "Designing Bilingual Education: Aspects of Immersion and 'European School' Models." *Journal of Multilingual Multicultural Development* 6, no. 1: 1–16.

California State Department of Education. 1984. *Language Census Report*. No. R30LC. Sacramento: Bilingual Education Office.

_____. 1982. *Basic Principles for the Education of Language Minority Students, An Overview*. Sacramento: Office of Bilingual Bicultural Education.

California State Legislature. 1982. *School Dropouts: A Discussion Paper*. Prepared by Catherine Camp, Joel Gibbs, and Marilee Monagan. Sacramento: Assembly Office of Research.

Campbell, Russel N. 1984. "The Immersion Education Approach to Foreign Language Teaching." In *Studies on Immersion Education: A Collection for U.S. Educators*, 114–43. Sacramento: California State Department of Education.

Commissioner of Official Languages. Canada. 1984. *Annual Report 1983*.

CPF Newsletter (Canadian Parents for French). 1981. No. 15 (November).

Cummins, James. 1983. *Heritage Language Education: A Literature Review*. Toronto: Minister of Education.

_____. 1981. "The Role of Primary Language Development in Promoting Educational Success for Language Minority Students." In *Schooling and Language Minority Students: A Theoretical Framework*, developed by the Office of Bilingual Bicultural Education, California State Department of

Education. Los Angeles: Evaluation, Dissemination, and Assessment Center, California State University.

_____. 1979. "Linguistic Interdependence and the Educational Development of Children." *Review of Educational Research* 49, no. 2 (Spring): 222–51.

De Lorenzo, William, and Lois Gladstein. 1984. "Immersion Education à l'Américaine: A Descriptive Study of U.S. Immersion Programs." *Foreign Language Annals* 17, no. 1 (February): 35–42.

Development Associates. 1980. *Evaluation of California's Educational Services to Limited- and Non-English Speaking Students*. Final Report. Photocopy.

Diaz, Rafael M. 1983. "Thought and Two Languages: The Impact of Bilingualism on Cognitive Development." In *Review of Research in Education*, 23–54. Washington, DC: American Educational Research Association.

Dolson, David P. In press. "Bilingualism and Scholastic Performance: The Literature Revisited." *NABE Journal*.

_____. 1985. "The Effects of Spanish Home Language Use on the Scholastic Performance of Hispanic Pupils." *Journal of Multilingual Multicultural Development* 6, no. 2: 135–55.

Dulay, Heidi, and Marina Burt. 1978. "From Research to Method in Bilingual Education." In *International Dimensions of Bilingual Education*, edited by James Alatis. Washington, DC: Georgetown University Press.

Evaluation, Dissemination, and Assessment Center (EDAC). 1981. *Schooling and Language Minority Students: A Theoretical Framework*. Los Angeles: California State University.

Fishman, Joshua. 1984. "Minority Mother Tongues in Education." *Prospects*. 14, no. 1: 51–61.

Gandara, Patricia C., and Marta Samulon. 1983. *Factors Influencing the Implementation of Language Assistance Programs*. A Rand Note. Santa Monica, CA: Rand.

Genesee, Fred. In press. "Second Language Learning Through Immersion: A Review of U.S. Programs." *Review of Educational Research*.

_____. 1984. "Historical and Theoretical Foundations of Immersion Education." In *Studies on Immersion Education: A Collection for U.S. Educators*, 32–57. Sacramento: California State Department of Education.

_____. 1983. "Bilingual Education of Majority Language Children: The Immersion Experiments in Review." *Applied Psycholinguistics* 4: 1–46.

Harley, Brigit. 1984. "How Good is Their French?" *Language and Society*, special issue, no. 12 (Winter): 55–60.

Hernandez-Chavez, Eduardo. 1984. "The Inadequacy of English Immersion as an Educational Approach for Language Minority Students." In *Studies on Immersion Education: A Collection for U.S. Educators*, 144–83. Sacramento: California State Department of Education.

Krashen, Stephen D. 1984. "Immersion: Why It Works and What It has Taught Us." *Language and Society*, special issue, no. 12 (Winter): 61–64.

_____. 1981. "Bilingual Education and Second Language Acquisition." In *Schooling and Language Minority Students: A Theoretical Framework*, 51–79. Developed by the Office of Bilingual Bicultural Education, California State Department of Education. Los Angeles: Evaluation, Dissemination, and Assessment Center, California State University.

Lambert, Wallace E. 1984. "An Overview of Issues in Immersion Education." In *Studies in Immersion Education: A Collection for U.S. Educators*, 8–30. Sacramento: California State Department of Education.

_____. 1982. "Additive Versus Subtractive Forms of Bilingualism: Confusions Regarding Programs of Immersion." Paper presented at the Second Annual Language Assessment Institute, June, Chicago.

Lapkin, Sharon, and James Cummins. 1984. "Canadian French Immersion Education: Current Administrative and Instructional Practices." In *Studies on Immersion Education: A Collection for United States Educators*, 58–86. Sacramento: California State Department of Education.

Lapkin, Sharon, and Merrill Swain. 1984. "Research Update." *Language and Society*, special issue, no. 12 (Winter): 48–54.

Legaretta, Dorothy. 1981. "Effective Use of the Primary Language in the Classroom." In *Schooling and Language Minority Students: A Theoretical Framework*, 83–116. Developed by the Office of Bilingual Bicultural Education, California State Department of Education. Los Angeles: Evaluation, Dissemination, and Assessment Center.

_____. 1979. "The Effects of Program Models on Language Acquisition by Spanish-Speaking Children." *TESOL Quarterly* 8, no.4 (December): 521–34.

Long, Michael. 1983. "Native Speaker/Non-Native Speaker Conversation in the Second Language Classroom." In *On TESOL '82: Pacific Perspectives on Language and Teaching*, edited by Mark Clarke and J. Handscombe, 207–25. Washington, DC: TESOL.

National Assessment for Educational Progress. 1982. *Students from Homes in Which English Is Not the Dominant Language: Who Are They and How Well Do They Read*. Denver: Education Commission of the States.

National Commission on Excellence in Education. 1983. *A Nation at Risk: The Imperative for Educational Reform*. Washington, DC: U.S. Department of Education.

President's Commission on Foreign Language and International Studies. 1979. *Strength through Wisdom: A Critique of U.S. Capability*. Washington, DC: U.S. Government Printing Office.

Ramírez, Arnuldo. 1985. *Bilingualism through Schooling: Cross-Cultural Education for Minority and Majority Students*. Albany: State University of New York Press.

Rhodes, Nancy, and A. Schreibstein. 1983. *Foreign Language in the Elementary School: A Practical Guide*. Washington, DC: Center for Applied Linguistics.

Rumberger, Russell W. 1981. *Why Kids Drop Out of High School*. Institute for Research on Educational Finance and Governance. Report no. 81–B4. Palo Alto, CA: Stanford University, School of Education.

Skutnabb-Kangas, Tove. 1979. *Language in the Process of Cultural Assimilation and Structural Incorporation of Linguistic Minorities*. Rosslyn, VA: National Clearinghouse for Bilingual Education.

Sowell, Thomas. 1981. *Ethnic America*. New York: Basic Books.

Steinberg, Stephen. 1981. *The Ethnic Myth: Race, Ethnicity and Class in America*. Boston: Beacon Press.

Swain, Merrill. 1984. "A Review of Immersion Education in Canada: Research and Evaluation Studies." In *Studies on Immersion Education: A Collection for United States Educators*, 87–112. Sacramento: California State Department of Education.

_____. 1983a. "Bilingualism Without Tears." In *On TESOL '82: Pacific Perspectives on Language Learning and Teaching*, edited by M. A. Clarke and J. Handscombe, 35–46. Washington, DC: TESOL.

_____. 1983b. "Communicative Competence: Some Roles of Comprehensible Input and Comprehensible Output in Its Development." Paper presented at the Tenth University of Michigan Conference on Applied Linguistics, University of Michigan, October, Ann Arbor, and revised for presentation at the Second Language Research Forum, University of Southern California, November, Los Angeles.

_____. 1981. "Time and Timing in Bilingual Education." *Language Learning* 31: 1–15.

Swain, Merrill, and Sharon Lapkin. 1981. *Bilingual Education in Ontario: A Decade of Research*. Toronto: Ministry of Education.

Tempes, Fred W., Laurie Burnham, Jim Campos, Charles Herbert, Eunice Lear, Sandy Matthews, and Marilyn Pina. 1984. "Theoretically Sound Bilingual Programs: Do They Really Work?" Paper presented at the annual conference of the California Association for Bilingual Education, January, San Francisco.

Troike, Rudolph C. 1978. *Research Evidence for the Effectiveness of Bilingual Education*. Rosslyn, VA: National Clearinghouse for Bilingual Education.

Veltman, Calvin J. 1981. "Anglicization in the United States: The Importance of Parental Nativity and Language Practice." *International Journal of the Sociology of Language* 32: 65–84.

Waggoner, Dorothy. 1984. "The Need for Bilingual Education: Estimates from the 1980 Census." *NABE Journal* 7, no. 2 (Winter): 1–14.